

AMENDMENT UNDER 37 C.F.R. § 1.111
Application No. 09/625,993

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

MAR 08 2004

1. (Currently Amended) A stator for an automotive alternator, said stator comprising: an annular shaped, ~~single piece~~ stator core formed as a lamination of a plurality of sheet-shaped magnetic members, said stator core having a plurality of teeth defining a plurality of slots extending in axial directions at one side of a yoke at an inner circumference thereof, ~~two sets of three phase stator coils fitted into said slots, and said lamination having~~ a first end surface and a second end surface fixed directly together to form said annular shape[[,]]; and

two sets of three-phase stator coils fitted into said slots, wherein 2 slots are provided for each phase of said stator coils and each magnetic pole and the total number of the slots is 72 or more.

2. (Previously Presented) A stator for an automotive alternator according to Claim 1, wherein an interval in the circumferential direction between a center of air gaps of adjacently formed slot opening portions is not the same.

3. (Currently Amended) A stator for an automotive alternator according to Claim 2 characterized in that, wherein said interval of slot opening portions is a repeated electrical angle of α degrees and $(60-\alpha)$ degrees, and said α degrees is in a range of from 16 to 29 degrees.

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4. (Currently Amended) A stator for an automotive alternator according to Claim 2
~~characterized in that, wherein~~ said interval of slot opening portions is a repeated electrical angle
of α degrees and $(60-\alpha)$ degrees, and said α degrees is in a range of from 22 to 24 degrees.

5. (Currently Amended) A stator for an automotive alternator according to Claim 2
~~characterized in that, wherein~~ said interval of slot opening portions is a repeated electrical angle
of 24 degrees and 36 degrees.

Claims 6-8 (Canceled)

9. (Currently Amended) A stator for an automotive alternator, said stator comprising:
an annular shaped stator core formed as a lamination of a plurality of sheet-shaped
magnetic members, said stator core having a plurality of teeth defining a plurality of slots
extending in axial directions at one side of a yoke at an inner circumference thereof, ~~two sets of~~
~~three-phase stator coils fitted into said slots~~, and end surfaces fixed together to complete said
annular shape[[,]]; and

two sets of three-phase stator coils fitted into said slots,
wherein 2 slots are provided for each phase of said stator coils and each magnetic pole
and the total number of the slots is 72 or more, and

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wherein widths of said teeth which define said slots alternate in size in a circumferential direction so that an interval in the circumferential direction between a center of air gaps of adjacently formed slot opening portions is an alternating electrical angle of α degrees and (60 - α) degrees, and said α degrees is in a range from 16-29 degrees.

10. (Currently Amended) The A stator for an automotive alternator according to Claim 9, said stator comprising:

an annular shaped stator core formed as a lamination of a plurality of sheet-shaped magnetic members, said stator core having a plurality of teeth defining a plurality of slots extending in axial directions at one side of a yoke at an inner circumference thereof, and end surfaces fixed together to complete said annular shape; and

two sets of three-phase stator coils fitted into said slots, wherein 2 slots are provided for each phase of said stator coils and each magnetic pole and the total number of the slots is 72 or more,

wherein widths of said teeth which define said slots alternate in size in a circumferential direction, and

wherein contact surfaces of said stator core, when said stator core is connected as an annular shape, are formed by dividing a wide tooth among said teeth of alternating widths in a circumferential direction with a substantially orthogonal surface.

Claims 11 and 12 (Canceled).

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13. (Currently Amended) The stator for an automotive alternator according to Claim 44
9, wherein said interval of slot opening portions is an alternating electrical angle of α degrees and
(60 - α) degrees, and said α degrees is in a range of from 22 to 24 degrees.

14. (Currently Amended) The stator for an automotive alternator according to Claim 44
9, wherein said interval of slot opening portions is an alternating electrical angle of 24 degrees
and 36 degrees.

15. (Currently Amended) A stator for an automotive alternator, said stator comprising:
a stator core in which a plurality of slots extending in axial directions are formed at an
inner circumference thereof, a plurality of teeth defining and partitioning said slots[,]; and
two sets of three-phase stator coils which are fitted into said slots,

wherein 2 slots are provided for each phase of said stator coils and each magnetic pole
and the total number of the slots is 72 or more, and

wherein a first set of said teeth each including first and second projections extending
extend in a circumferential direction are formed on said teeth which partition said slots, said first
and second projections each having a length, and different lengths so that an interval in a
circumferential direction between a center of air gaps of adjacently formed slot opening portions
between said teeth is alternated by alternating said lengths of said projections.

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16. (Currently Amended) The stator for an automotive alternator according to Claim 15,
wherein said interval of ~~slot opening portions~~ is an alternating electrical angle of α degrees and
(60 - α) degrees, and said α degrees is in a range from 16-29 degrees.

17. (Currently Amended) The stator for an automotive alternator according to Claim 15,
wherein said interval of ~~slot opening portions~~ is an alternating electrical angle of α degrees and
(60 - α) degrees, and said α degrees is in a range of from 22 to 24 degrees.

18. (Currently Amended) The stator for an automotive alternator according to Claim 15,
wherein said interval of ~~slot opening portions~~ is an alternating electrical angle of 24 degrees and
36 degrees.

Claims 19-27 (Canceled).

28. (New) A stator for an automotive alternator, said stator comprising:
an annular shaped stator core having a plurality of teeth defining a plurality of slots
extending in axial directions at one side of a yoke at an inner circumference thereof; and
two sets of three-phase stator coils fitted into said slots,

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wherein an interval in the circumferential direction between a center of air gaps of adjacently formed slot opening portions is an alternating electrical angle of α degrees and $(60 - \alpha)$ degrees, and said α degrees is in a range from 16-29 degrees.

29. (New) The stator for an automotive alternator according to claim 28, wherein said α degrees is in a range of from 22 to 24 degrees.

30. (New) The stator for an automotive alternator according to claim 28, wherein said interval is an alternating electrical angle of 24 degrees and 36 degrees.

31. (New) The stator for an automotive alternator according to claim 28, wherein 2 slots are provided for each phase of said stator coils and each magnetic pole and the total number of the slots is 72 or more.

32. (New) The stator for an automotive alternator according to claim 28, wherein widths of said teeth which define said slots alternate in size in a circumferential direction to define said alternating electrical angle.